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Your Stake in International Economic Development and Foreign Trade

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YOUR STAKE IN INTERNATIONAL ECONOMIC DEVELOPMENT AND FOREIGN TRADE

Long-run prospects for larger commercial exports affected greatly by economic progress and per capita income growth in less developed countries.

by Earl O. Heady and Leroy Blakeslee

THE SOLUTION to the surplus capacity problem of Iowa and United States agriculture may rest on economic growth of the less developed countries and enlarged international trade in agricultural products.

International economic development promises to do more for our agriculture over the long run than all technological improvement and domestic population growth over the decades ahead. In fact, technological improvement at a faster rate than domestic population growth only promises to intensify our problems of surplus capacity over the next two decades. Analyses indicate that our surplus capacity may increase more than 50 percent in the next 10 years.

Of course, international economic development and trade isn't a solution for tomorrow, but its long-run promise is so great that the farm community needs to turn more of its thought and efforts in this direction.

International Trade . . .

Even now, the products from one out of every four acres of cropland move into international trade. Consider the impact if this outlet didn't exist.

In recent years, around two-thirds of the wheat and rice crops, one-half of the soybean crop, one-third of the cotton crop and about one-fourth of the tobacco crop have moved into international trade. While agricultural products represented only 18 percent of the nation's total exports in 1953, they amounted to nearly 25 percent of all exports in 1964. Agricultural exports averaged over $6 billion in 1963 and 1964 — an amount equal to 14 percent of the nation's gross farm income for the two years.

In early United States history, wheat, cotton and tobacco dominated our exports. In the last two decades, however, exports of soybeans and feed grains have increased rapidly and are included in the five major export commodities. Under certain patterns of world economic development, feed grains and soybeans could show major gains as exports in future decades. Grain occupies more than 70 percent of the world's harvested cropland.

Changing Patterns of Grain Trade . . .

Patterns of grain trade will depend heavily on supply conditions, population growth and economic development of the less developed countries. Important changes already are taking place in trade patterns. From early times until World War II, there was one general trade pattern: Western Europe was the only importing region, and the rest of the world exported to it. Just prior to the war, there were six grain exporting areas: North America exported about 5 million tons, Latin America about 9 million tons, Eastern Europe 5 million tons, and each of three other regions — Asia, Africa and Oceania (New Zealand and Australia) — small quantities.

Western Europe has maintained its position as an importer. This region buys about the same amount of grain as in the immediate prewar period to meet greater population needs, but mammoth changes have taken place in trade among other world regions. Only North America and Oceania remain major exporters. Asia and Africa have become net importers along with Latin America and Eastern Europe.

Thus we find that a striking change has occurred in the grain trade position of the less developed countries. In earlier times they were net exporters. Prior to World War II, the net annual flow of grains from the less developed regions was about 11 million tons. Since the last war, however, this flow has been reversed. By 1964, annual shipments of grain from developed countries to less developed countries amounted to 24 million tons.

Economic Development . . .

The main variable relating to growth in food demand in the United States is population. Do-

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TABLE 1. Daily per capita food intake by major world regions.

Region	Year	Calories (number)	All protein (grams)	Animal protein (grams)	Fat (grams)
United States	1960	3,190	95	64	146
Oceania	1960	3,255	101	69	146
Canada	1960	3,110	96	64	140
Russia	1958	2,985	92	26	70
Eastern Europe	1958	2,925	77	28	83
Northwestern Europe	1960	3,065	88	52	129
Mediterranean Europe	1960	2,720	79	27	80
Latin America	1960	2,570	66	23	60
Africa	1958	2,455	64	11	44
Western Asia	1958	2,370	74	13	40
Communist Asia	1958	2,200	65	6	32
Far East (excluding Communist Asia)	1960	2,120	55	9	32

mestic food demand is projected to grow only slightly faster than population because per capita income and food consumption are already at high levels.

In less developed countries, however, the picture is different. Two important variables affect the demand for food: population and income. Since incomes are so low in these countries, each increase in a person's income causes him to spend more on food. The percentage increase in expenditures on food for each one percent increase in per capita income — the income elasticity of demand for all food (excluding the services sold with food) — is about zero in the United States. It isn't much higher in some of the more advanced countries of Western Europe. But it ranges as high as .5 to 1.0 percent in many less developed countries. This indicates that a 10 percent increase in per capita income can increase the amount spent on food by 5 to 10 percent, depending on the particular commodity.

Since incomes are so low in less developed countries, food demand can increase as much from improved and upgraded diets as from population growth—although population growth has been the dominating force to date.

Existing data on income elasticities of demand from over the world reveal that in less developed countries a 10-percent increase in per capita income may be accompanied by increased expenditures as high as 5 percent on cereals for food, upwards of 12 percent of livestock products and an average increase of 7 percent. The less developed countries contain most of the world's population. Thus, any rise in per capita income, starting from an income often miserably low, is reflected at once in increased demand for food.

Table 1 indicates how meager are the diets for approximately half the world's population. For example, the entire average daily intake of animal protein in these peoples' diets is about equal to that supplied in a single cup of whole milk. Approximately half the world's population has a diet which is 100 calories and a gram of protein per day below the minimum requirement for sustained normal physical activity. And deficit is measured not in terms of the western "standard of dining" but only in providing for minimum biological needs.

The race between food production and population growth will continue to be a basic world problem. Yet we must set our sights higher, for a "public conscience" has developed over the world that says economic development should progress at a pace and to a level where the masses of people will have living standards exceeding subsistence diets and little else. If population and growth rates are only at levels to keep diets and income per capita at the subsistence level, our own role — and that of the developed world — may continue to be mainly that of giving food for humanitarian reasons. With sustained and more rapid economic development, however, world food demand is likely to expand greatly on a sound market basis. Food deficit countries then can finance their larger food requirements from their own exports and increments in national income.

Should per capita incomes quadruple among the poorer half of the world's population, the resulting income benefits to Corn Belt farmers would be greater than those caused by any other combination of domestic and international forces. With slow economic development and a population expansion which keeps diets at the subsistence level, our major exports to the less developed world

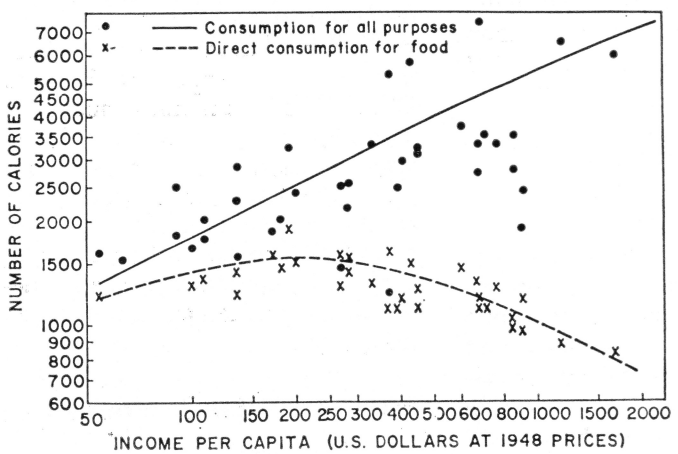

Figure 1. Per capita consumption of cereals and starches in relation to per capita income. Data from inter-country comparisons.

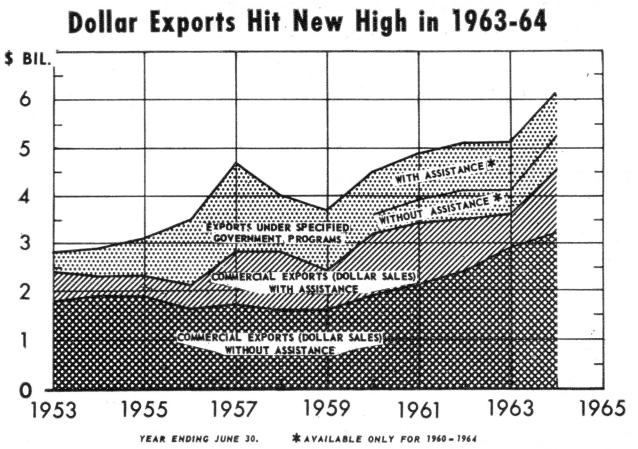

Figure 2. Value of United States agricultural exports: total and by type of transaction.

for human consumption will continue to be cereals, such as wheat and rice.

But with sufficient economic growth and increases in per capita incomes, food demand will turn more towards livestock products and the soybeans and feed grains required to produce them. Japan, a country foremost in economic growth in the postwar period, is an excellent example.

In Japan, population has increased by one percent per year, but per capita incomes have doubled in the last 10 years. Consequently, the Japanese are including more meat, eggs and milk in their diets. And feed grain imports, which already have reached 3 million tons per year, are projected to grow to 10 million tons by 1975. As a country, Japan is our leading overseas market with imports of United States farm products now approaching $800 million per year. Experience there clearly suggests that income growth is more important than population growth in raising the demand for imports.

For human food, cereals have a low income elasticity of demand; they provide the foundation for subsistence and meager diets. Hence, as per capita incomes increase, expenditures on cereals or grains for food increase by a relatively small percentage and eventually decrease at higher income levels. However, per capita use of grains for all purposes continues to rise rapidly. Total use increases as people with higher incomes include a greater proportion of livestock products in their diets.

It takes more grain to produce a pound of livestock products than a pound of cereals used for human food. This relationship, measured on a world or cross-country basis, is illustrated in Figure 1. As the broken line indicates, the income elasticity of demand for cereals to be directly consumed falls to zero at per capita incomes of around $200 and becomes negative for higher incomes. Thus, maximum per capita direct consumption of cereals also occurs when per capita incomes are about $200. As the solid line shows, consumption per capita *for all purposes* increases steadily with incomes with the greatest proportion of the increases going for livestock feed.

Under favorable world political conditions and sufficiently rapid economic growth, it is possible that Eastern Europe could develop as an importer and market source for feed grains. Certainly further improvement in per capita incomes in this region will turn diets more towards livestock products. While efforts will be made to increase feed grain production, the production potential may not be able to keep pace with consumer demand for livestock as it reflects back to cereals and soybeans.

Much of the world, of course, will maintain or accelerate its agriculture development efforts. This will be especially true of the less developed countries where diets are at subsistence levels and scarcity of capital and foreign exchange crimps commercial imports of foods. But even under sustained peace and economic growth in the less developed countries, it appears unlikely that food production can be pushed to levels matching the increased demand from both population growth and important improvements in per capita incomes. It is on this basis that Corn Belt and United States farmers might best rest their long-run hopes on more rapid and sustained economic growth of the less developed countries. As stated previously, this is a brighter prospect for American farm prosperity than all of the prospective technological improvements and population growth within the nation.

It is a long-run prospect and not one which will materialize to solve our surplus problems next year. But exports will be of growing importance for our farm economy over the next 10 years. These prospects give farmers an important reason to become acquainted with and students of problems of economic development for the less developed world.

Export Methods . . .

An important share of our present export market depends on our use of surplus stocks as gifts, "Food for Peace" and low cost means of aiding development. Figure 2 illustrates the growth of total agricultural exports as well as the composition of the total by type of transaction. Nearly all exports under government programs are now Public Law 480 shipments. Under this act 17 percent of fiscal year 1964 agricultural exports were paid for in foreign currencies, and another 9 percent went abroad as donations and disaster relief or under barter and long-term credit programs. Purchasing countries receive most foreign currency payments back as loans supporting development programs. Numerous commodities were involved, but wheat and flour dominated with 58 percent of total Public Law 480 shipments. Next were dairy products with 10 percent and cotton with 9.

Shipments with export payment assistance form another category of transactions. United States farm programs cause domestic prices of some U.S. commodities to be well above world prices. In such cases the government may sell from Commodity Credit Corporation stocks to exporters at less than market prices or pay exporters the difference between domestic and world prices for commodities purchased on the U.S. open market. Eligible commodities generally may receive assistance for either dollar or foreign currency sales. Wheat and cotton received 88 percent of such assistance in fiscal year 1963 with an average assistance payment of 67 cents per bushel for wheat and 8½ cents per pound for cotton.

Exports for dollars were further aided through credit sales backed by the Export Import Bank and Commodity Credit Corporation. Under more rapid economic growth, and attainment of a large improvement of per capita incomes over the world, our exports would move more into commercial channels and would function less as gifts and surplus disposal.

The total opportunity for United States farm exports depends on our own domestic farm policies and their effect on the competitive position of our commodities, agricultural improvement in other countries, and similar developments. We have initiated studies to analyze these potentials as they relate to the next two decades. *In subsequent articles, we will appraise both of these forces and the prospects for growth in world food demand.*